

XIV. *The Natural History of Oiketicus\**, a new and singular Genus of Lepidoptera. By the Rev. Lansdown Guilding, B.A. F.L.S.

Read June 6, 1826.

I BECAME acquainted with the animals here described on my return to the West Indies in 1817: but though these interesting creatures have been attentively studied since that period, I have only within a few days been enabled to complete their history. There appeared so much of novelty in the structure of their females, that I was unwilling to present any notice on the subject to the Linnean Society till all doubts had been removed. The larvæ being common on many of our trees, a considerable number were bred; but I was always disappointed in my expectations of discovering the female insect. The male at the stated period made its appearance; but I never dreamt that its unwieldy and almost motionless partner was to be searched for in the puparium, which it was destined never to desert. Judging from other insects, I hastily imagined that the female pupa had not been fully developed in consequence of the attacks of parasitic *Ichneumonidæ*. It was only by accident that a specimen uncased after the rupture of the thoracic carina, cleared up the mystery. When the pupa has slept the appointed time, the animal still resident within the habitaculum formed by the larva, opens the carina by the motion of its head, and prepares to receive the winged male. Here again, another difficulty presented itself. I was unable to ascertain how the sexual union

\* Nomen ab οἰκητικός, *qui habitaculum quærere solet*.

could

could take place : for there was no appearance of an opening at the extremity of the puparium (Kirby), nor could I detect the reproductive organs in the thoracic portion of the body, which might have been approached *inter nuptias*. While engaged in pressing and examining the male organs under the microscope, I discovered the extensile extremity of the penis, admirably adapted by its extraordinary length and flexibility for the sexual intercourse, which appears to terminate in the destruction of the male. It is highly improbable that the perfect insects have been seen in Europe ; for no sooner has the male arisen from his pupal slumber, than he begins, even before the full expansion of his wings, to flutter about with so much violence that his beauty has commonly disappeared before the entomologist can secure him. It is well known to the European naturalist, that the females of several Lepidopterous insects are nearly apterous : but I believe all at present described possess the rudiments of wings and antennæ, with perfect feet. The female of *Phalena antiqua* of Linn., which I have often collected when a boy, not only quits the folliculus, but, *copulâ juncta*, enjoys with its partner the pleasures of the open fields. Here, however, we have an animal which in its adult state is for ever excluded from the light, and never even beholds the mate to which it is indebted for its progeny. After impregnation, the female begins to fill the bottom of its puparium with her ova closely packed in the down rubbed from her body ; and having performed this duty, either presses herself through the thoracic carina, reduced to a shrivelled morsel of dried and scarcely animated skin, or dies within the case.

The young soon force their way out of the puparium which had served for the defence of the ova, and spreading about the tree (an innumerable host), prepare themselves an habitation before their first repast.

Ordo. LEPIDOPTERA.

Tribus. NOCTURNA. Lat.

Genus. OIKETICUS.

Mas. *Os simplicissimum, lingua aut nulla aut omnino intra os retracta.*

*Labium* partitum, rami apice squamosissimi.

*Abdomen* extensile, elongatum.

*Glans penis* longitudine corporis, extensilis, non retractilis? spinulis recurvis sparsis.

Fœm. *Imago* semper pupicola, obesa, segnis, aptera.

*Aures?* duæ frontales, excavatæ, indistinctæ.

*Os* simplicissimum.

*Lingua* nulla.

*Palpi* nulli.

*Antennæ* nullæ.

*Pedes* spurii, brevissimi, apice truncati.

*Unguiculi* nulli.

*Thorax* vix distinctus, segmentis quatuor? cute pergamenæâ tectus.

*Ovarium* ferè magnitudine abdominis.

*Pupa* subcoarctata, *carinâ thoracicâ* superiori mox dehiscente ad marem recipiendum.

*Larva* obesa, pilis sparsis. *Mandibulæ* validissimæ. *Ocelli* plurimi. *Labrum* emarginatum. *Antennulæ* setigeræ. *Palpi* duo apice appendiculati. *Pedes* sex validissimi ad januam claudendam (hostibus appropinquantibus). *Propedes* decem, duobus analibus. *Colus* (instrumentum textorium) extensilis, setâ utrinque unicâ, apice perforatus; dum pascit animal in fossulâ gutturali reconditus.

*Habitaculum*

*Habitaculum*\* cylindraceum, utrinque apertum, filis textum et ramulis foliisque morsis munitum. *Larva* metamorphosin subiens (apice semper aperto ad fugam imaginis masculæ, et ad nuptias fœminæ), januam clausam filis ad ramum deligat, capiteque pronò somnum expectat.

*Pupa mascula* fronte productâ adminiculis analibus duobus majoribus incurvis: segmentis abdominalibus serie unicâ spinularum incurvarum, unicâ recurvarum.

*Regio.* India Occidentalis.

*Genus affine* Zeuzeræ? *Lat.*

*Typus genericus.* *Oiketicus Kirbyi, Nobis.*

#### OIKETICUS KIRBYI.

♂. *O. ater* purpureo-nitens, alis superioribus elongatis: inferioribus angulo anali subproducto; antennis dimidiatopectinatis apice serrulatis: tarsis rufescentibus: ore pallido.

♀. *O. oculis* rufescentibus: thoracis squamis corporisque squamulis vitellinis: collo anoque brunneo lanuginosis.

*Larva* obesa pedibus atris latissimis, propedum musculis retractorius apice ferrugineo, spinulæ prehensoriæ atræ recurvæ. *Corpus* parcè pilosum segmentis duodecim, lateribus prominulis: anterioribus tribus capiteque rotundato flavescen-

\* The habitaculum or dwelling of the larva of insects must be distinguished from the folliculus or cocoon, which is solely prepared for the defence of the pupa, and closed on all sides. It is observed in the *Tineadæ* and other insects, but is commonly of a flattened shape. In one Trichopterous? species known to me it is flattened ovate, open at the ends, and fixed to rocks in rivers. In a species of the family *Botydæ* which I have lately detected in vast numbers in our mountain streams, it is flattened, irregular, and attached by the margin and two pillar-like processes to the rocks below the surface of the water. It possesses a semicircular janua for the escape of the imago, and is fenestrated on the margin. The larva of this curious moth breathes by tracheal branchiæ!!

tibus,

tibus, brunneo pictis: reliquis obscuro-lividis. *Tracheæ* ferrugineæ. Raro Ichneumonibus infestatur.

*Ovum* rotundatum, parvum, flavicans.

*Pullus* caudâ erectâ, mox horizontali propter habitaculi pondus.

Ab ovo erumpens extemplo folia scindit, filisque emissis domum format, formicas timens omnivoras feroces.

*Habitaculum* maximum, fœmininum majus.

*Larva* exterrita *januam* bursiformem mandibulis pedibusque citissimè claudit, ac sic filis paucis suspensa tutam manet.

*Pupa mascula* elongata brunnea, segmentis abdominalibus ferrugineo circulatis, fronte subcarinatâ, dorso bisetoso.

*Pupa fœminina* concolor, obesa, adminiculis analibus asperis, segmento unico spinuloso, cæteris margine crenatis.

*Habitat* hortorum pestis in Terminaliis aliisque arboribus vorax.

In honorem amici G<sup>i</sup>. Kirby, Soc. Reg. et Linn. Socii, Entomologorum Angliæ ducis indefessi, oculatissimi.

OIKETICUS MACLEAYI.

♂. *O. niger*, alis latis rotundatis; antennis totis pectinatis: pene ferrugineo.

♀. *O. flavescens*, flavo lanuginosa.

*Larva* caudâ semper erecta: segmentis tribus anterioribus thoracicis, capiteque flavis brunneo pictis; reliquis obscuris, verrucis elevatis pallidis sparsis.

*Var. β.* pallidior.

*Pupa mascula* fronte productâ, segmentis antice sordidè-rufescentibus.

*Pupa fœminina* vitellina, fasciis quinque nigris, ano simplici.

*Habitat* larva inter ramos truncosque vetustos vix noxia: habitaculum spinulis lichenibus pulchrè nonnunquam decorans.

Tertia species ni fallor mox describenda.

Amico G<sup>o</sup>. S. MacLeay, Soc. Linn. Socio, naturæ scrutatori doctissimo,—interpreti celeberrimo, hæcce species novi generis meritò dicatur.

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EXPLICATIO TABULARUM.

TAB. VI.

- Fig. 1. *Oiketicus Kirbyi* mas paululum auctus. *a.* Tarsus.  
Fig. 2. Penis glande longissimo, spinulis recurvis tectus ad arcotiorem copulam. *b.* Penis lamellæ supernè visæ. *c.* Penis corpus corneum. *d.* Penis infernè visus cum lamellis. *e.* Lamella lateralis cum appendice hirsutâ.  
Fig. 2*b.* Caput auctum palpis vi reclinatis. *a.* Antenna aucta.  
Fig. 3. Magnitudo naturalis.  
Fig. 4. Pupa mascula aucta. *a.* Pars auctus cum duplici serie spinularum dorsalium.  
Fig. 5. Alæ cum fibulâ humerali in situ.  
Fig. 6. Fœmina magnitudine naturali. *a.* Caput. *b.* Oculus\*.  
Fig. 7. Eadem ad latus visa. *a.* Pes auctus.  
Fig. 8.8.8. Oviductus.  
Fig. 9. Pupa fœminina. *a.* Spinulæ. *b.* Carina thoracica. *c.* Facies.  
Fig. 10. Puparii sectio ovis repleti.

TAB. VII

- Fig. 1. Ova magnitudine naturali et aucta.  
Fig. 1*a.* Ova immatura, ovario extracta

\* In a *single* specimen something like the rudiments of antennæ were visible beneath the eyes, as in this figure.

Fig.

